CUMULATIVE INDEX 1996

Volume 14

CHANGING THE NATURAL HISTORY OF CORONARY February

ARTERY DISEASE: RISK FACTORS AND THEIR

MODIFICATION, pages 1-173

May TRIGGER AND TIMING OF CARDIAC EVENTS, pages 175-326

August DIAGNOSIS AND MANAGEMENT OF INFECTIVE

ENDOCARDITIS, pages 327-470

November ATRIAL FIBRILLATION, pages 471-653

Note: Page numbers of article titles are in boldface type

Ablation, for atrial fibrillation and flutter, 478, 480. See also Fibrillation, atrial, atrioventricular junctional ablation for and Fibrillation, atrial, catheter ablation for.

Abortion, infective endocarditis and, 332, 336

Abscess(es), in infective endocarditis, 427, 431 brain, 434

detection of, 374, 375, 379, 440, 441 incision and drainage of, 335, 336

Acinetobacter species, in infective endocarditis, 408, 409

Acne, infective endocarditis and, 335, 387 Acquired immunodeficiency syndrome (AIDS), infective endocarditis in, 417

Actinobacillus actinomycetemcomitans, in infective endocarditis, 354, 410

Activation space constant, in atrial fibrillation, 499 Adenoidectomy, infective endocarditis and, 330, 335 Aerococcus urinae, in infective endocarditis, 413

Alcohol, in atrial fibrillation, 502

in heart disease, 73-76

beverage type and, 75, 76 epidemiologic studies of, 73, 74

mechanisms of, 74, 75

Alcoholism, infective endocarditis and, 353

Amiodarone, for atrial fibrillation, 513, 514, 532, 533,

Amoxicillin, to prevent infective endocarditis, 334, 336 Ampicillin, to prevent infective endocarditis, 334

Aneurysm(s), mycotic, in infective endocarditis, 430, 431, 434, 448

Anger, arrhythmias induced by, 293 animal studies of, 293-299

human studies of, 293

impact of on cardiac electrical properties in normal and ischemic heart, 298, 299

impact of on coronary hemodynamic function, 297 in patients with coronary heart disease, life-threatening cardiovascular consequences of, 289-304

ischemia induced by, 292, 293 animal studies of, 293–299

human studies of, 292, 293

lethal physiologic characteristics of, 303, 304 myocardial infarction precipitated by, epidemiologic

studies of, 289-292

personality type as factor in, 291, 292 myocardial ischemia following, 297, 298

Angina pectoris, stable, prognosis of, 224 triggers in, 180

Angiographic trials, coronary, of cholesterol-lowering therapy, 38-42

of multifactorial risk reduction therapy, 40, 43, 44 relationship between low-density lipoprotein cholesterol and outcome of, 44, 45

Angiography, comparison of autopsy and natural history studies with, 223, 224

infective endocarditis and, 332

limitations of in determining degree of stenosis, 223,

to show progression of coronary artery disease, 224, 225

Anomaly(ies) of coronary arteries, congenital, as cause of exercise-related sudden death in young athletes, 200, 201

Antiarrhythmic drugs, for atrial fibrillation, 507-517, 521-534. See also specific names of drugs, e.g.,

Quinidine. cellular targets of, 508, 509

classification of, 508, 509

electrophysiology and, 508, 509

evaluation of, 509

limitations of, 516, 517

mechanisms of action of, 478, 479, 508, 509 staged care approach to, 515, 516

in prevention of sudden cardiac death, 190, 191 Antibiotics, prophylactic, for infective endocarditis, 332-337

Anticoagulation therapy, for cardioversion in atrial fibrillation, 538

Antioxidants in heart disease, 76-79

basic research in, 76

human observational data in, 76, 77

randomized trials of, 77-79

Aorta, coarctation of, risk of infective endocarditis in,

rupture of, as cause of sudden cardiac death in young competitive athletes, 201

Aortic valve(s), bicuspid, risk of infective endocarditis in, 386

stenosis of, and sudden cardiac death, 186 in young competitive athletes, 203

Arrhythmia(s), anger-induced, animal studies of, 293–299

antifibrillatory influences of vagus nerve activation and, 296, 297

central neuroanatomic basis of, 293, 294

human studies of, 293

role of peripheral autonomic nervous system in, 294-297

sympathetic nervous system influences on, 294, 295 atrial. See also *Fibrillation*, *atrial* and *Flutter*, *atrial*. lessons from animal models of, **471–480**

reentrant excitation in, 471, 472

ventricular, determining chronology of, 190

Artery(ies), coronary, anomalies of, as cause of exerciserelated sudden death in young athletes, 200, 201 tunneled, as cause of exercise-related sudden death in

young athletes, 204
Aspergillus species, in infective endocarditis, 355,

414–416

Aspirin, effect of on circadian variation of cardiovascular events, 245

in prevention of embolization in chronic atrial fibrillation, 539, 540

versus warfarin, 540 Atenolol, for heart rate control in atrial fibrillation, 528, 529

Atherosclerosis, altered endothelial regulation of vasomotion in, 6–11

benefits of exercise for, 85-94

development of exercise prescription for, 90-93

lipid lowering in, 117-128

pathogenetic factors in development of, 211, 212 pathophysiology of, 211

plaques in. See Plaque(s).

'regression trials" of, 31-49

background and methodology of, 31–38

coronary progression in, 31–35 coronary regression in, 35, 36 endpoint measurements in, 37, 38

serial coronary arteriograms in, assessment of, 35-37

role of in coronary heart disease, 176-178 role of inflammation in, 212, 213

Atherosclerosis in Communities (ARIC) Study, 241, 243 Athlete(s), sudden cardiac death in, 195–207

older, 206, 207

young competitive, 195-206

aortic rupture as cause of, 201

aortic valve stenosis as cause of, 203

arrhythmogenic right ventricular dysplasia as cause of, 203, 204

atherosclerotic coronary artery disease as cause of, 201, 202

blunt impact to the chest as cause of, 205, 206 causes of, 196-206

conduction system abnormalities as cause of, 204 congenital coronary artery anomalies as cause of, 200, 201

definitions of, 195

demographics of, 195, 196

exercise-induced coronary spasm as cause of, 204 hypertrophic cardiomyopathy as cause of, 197, 198–200

long QT syndrome as cause of, 204 mitral valve prolapse as cause of, 202, 203 myocarditis as cause of, 202 primary arrhythmia as cause of, 204 right ventricular dysplasia as cause of, 204 tunneled coronary artery as cause of, 204 with apparently normal hearts, 204 Wolff-Parkinson-White syndrome as cause of, 204 Atrial fibrillation. See Fibrillation, atrial.
Atrial septal defect(s), infective endocarditis and, 328,

Bacillus cereus, in infective endocarditis, 354 Back pain, in infective endocarditis, 356

Bacteria, in infective endocarditis. See also names of specific bacteria, e.g., Staphylococcus aureus.

anaerobic, 354, 411 enterococci, 353, 385, 386, 416

gram-negative, 354, 386

gram-positive, 354

staphylococci, 353, 354, 385

streptococci, 353, 385, 386

Bacteroides fragilis, in infective endocarditis, 354, 411, 412 Barium enema, infective endocarditis and, 331, 336

Bartonella (Rochalimaea) quintana, in infective endocarditis, 354

Bartonella species, in infective endocarditis, 412, 413 Beta Blocker Heart Attack Trial (BHAT), 190

Beta-blocking agents. See also specific names, e.g., Propranolol.

after myocardial infarction, prevention of death by, 190

for heart rate control in atrial fibrillation, 524, 528, 529

acute, 528

during exercise, 528, 529

guidelines for therapy with, 530, 531

paroxysmal, 529

resting, 528 BHAT (Beta Blocker Heart Attack Trial), 190

Bite(s), animal and insect, infective endocarditis and, 387

Blalock-Taussig shunt(s), infective endocarditis and, 329 Blindness, sudden, in infective endocarditis, 356 Blood pressure, changes in. See *Hemodynamic changes*. Blunt impact to chest as cause of exercise-related

sudden death in young athletes, 205, 206 Bowel disease, inflammatory, infective endocarditis and,

Branhamella catarrhalis, in infective endocarditis, 413 Bronchoscopy, infective endocarditis and, 330, 335 *Brucella* species, in infective endocarditis, 354, 357, 411 Brucellosis. See *Brucella species*.

Burn(s), infective endocarditis and, 329

Calcium-channel blockers. See also specific names, e.g., Verapamil.

for heart rate control in atrial fibrillation, 524, 529–531 acute, 529

daily, 529, 530

effects of during paroxysmal atrial fibrillation, 530 effects of on exercise duration and tolerance, 530 guidelines for therapy with, 530, 531

Campylobacter fetus, in infective endocarditis, 409
Candida species, in infective endocarditis, 355, 414–416
Capnocytophaga canimorsus, in infective endocarditis, 411
Carbon monoxide production by cigarette smokers, 54
Cardiac Arrhythmia Suppression Trial (CAST), 187–191
Cardiac death, sudden. See Death, cardiac, sudden.

Cardiac lesion(s), type of, in stratification of risk of endocarditis, 334, 335

Cardiac surgery, atrial fibrillation following, 501 atrial flutter following, 579, 580

infective endocarditis and, 327, 332, 336

Cardiobacterium hominis, in infective endocarditis, 354, Cardiomyopathy, hypertrophic, in young competitive

athletes, 197, 198-200 infective endocarditis and, 334

sudden cardiac death in, 186 Cardiovascular events, acute. See also specific types,

e.g., Myocardial infarction. during life crises and disasters, 273-276

mechanism of onset of, 239, 240

stress as trigger of, epidemiologic evidence for, 273-

triggering of, prevention and practical aspects of, 309-311

Cardioversion, in atrial fibrillation, anticoagulation regimen for, 538

echocardiographic predictors of success of, 544, 545 guided by transesophageal echocardiography (TEE), 550

left atrial size and, 544, 545

prevention of embolism related to, 537, 538 return of atrial mechanical function after, 538, 549,

transesophageal echocardiography before, 538, 539 CAST (Cardiac Arrhythmia Suppression Trial), 187-191 Catheterization, infective endocarditis and, cardiac, 332,

pulmonary artery, 329 urethral, 331, 336

valve trauma caused by, 328

Cautery, nasal, infective endocarditis and, 330, 387 Cefamandole, to prevent infective endocarditis, 334 Cefazolin, to prevent infective endocarditis, 333 Cephalosporin, to prevent infective endocarditis, 337 Cephalothin, to prevent infective endocarditis, 334 Cerebrospinal fluid, abnormalities of, in infective endocarditis, 434

Cervix, biopsy of, infective endocarditis and, 332 Chest, blunt impact to, as cause of exercise-related sudden death in young athletes, 205, 206

Childbirth, infective endocarditis and, 332, 336 Children, infective endocarditis in, 386

prophylaxis for, 389, 390

Chlamydia, in infective endocarditis, 357 Cholesterol, low-density lipoprotein (LDL). See Lipoprotein(s).

serum, role of in heart disease, 70, 71

Cholesterol-lowering therapy, angina and myocardial ischemia and, 45, 46

coronary angiographic trials and, 46-48

coronary events and, 46-49 new coronary lesions and, 46, 47

Scandinavian Simvastatin Survival Study of, 48, 49

Cigarette smoking, and coronary heart disease, 51-65 management of smoker with, 59, 60, 61 pathophysiology of, 53-55 population at risk for, 55, 56

as trigger of myocardial ischemia, 278 behavioral treatment programs for, 57

blood clotting and, 54, 55

cessation of, 56 barriers to, 56, 57

behavioral factors and, 56 health benefits of, 52, 53

mood disorders and, 56, 57

nicotine dependency and, 56

primary prevention of coronary heart disease and,

secondary prevention of coronary heart disease and, 53

treatment to promote, 57-59

weight gain and, 57

health risks of, 51, 52 metabolic effect of, 55

hemodynamic changes caused by, 233

nicotine replacement therapy in, 57-59

passive, effects of, 55 systemic effects of, 53, 54

vascular effects of, 54

Circadian patterns, in efficacy of thrombolytic therapy, 252-256

in tachycardia, 190

in thrombolytic and antithrombotic activities, 251-261 more lysis versus less thrombosis in, 252

in thrombolytic and antithrombotic potential, 256-259 of coronary heart disease, epidemiologic aspects of, 175-183

pharmacologic agents affecting, 182, 183

of hemostatic factors, 243-245

of strokes, 179, 180

of sudden cardiac death, 185-193

therapeutic implications of, 190, 191

Cirrhosis, infective endocarditis and, 329 Clonidine in treatment of nicotine withdrawal, 59

Clostridium species, in infective endocarditis, 412, 413 Clubbing of fingers, in infective endocarditis, 432 Cold weather, hemodynamic changes caused by, 233

Collagen vascular disease(s), infective endocarditis and,

Colonoscopy, infective endocarditis and, 331, 336 Commotio cordis as cause of exercise-related sudden death in young athletes, 205, 206

Conduction, cardiac, abnormalities of, as cause of sudden cardiac death in young competitive athletes, 204

as complication of infective endocarditis, 428 anisotropic, reentrant excitation and, 484-486

Congenital heart disease, infective endocarditis in, 328, 329, 351, 383-390

clinical diagnosis of, criteria for, 384, 385 clinical manifestations of, 387, 388

echocardiography in, 388 microbiology of, 385, 386

pathogenesis of, 383, 384

predisposing lesions and risk factors in, 386, 387

prophylaxis for, 389, 390 surgical intervention for, 389

treatment of, 388, 389

Contraceptive device(s), intrauterine, infective endocarditis and, 332, 336, 337

Coronary artery(ies), angiographic morphology of, following myocardial infarction, 225, 226 anomalies of, as cause of exercise-related sudden

death in young athletes, 200, 201

Coronary artery disease, angiographic progression of, 224, 225

as cause of sudden death in older athletes, 206, 207 atherosclerotic, as cause of sudden cardiac death in young competitive athletes, 201

barriers to lifestyle changes in, 159-168

of cardiologists, 167 of patients, 160-162

physician-specific, 162-165

systemic, 165-167 effect of estrogens and menopause on, 105-114 Coronary artery disease (Continued) angiographic studies of, 107, 108 balancing risks and benefits of estrogen replacement therapy and, 113, 114 cardioprotective mechanisms, 111-113 community-based case-control studies of, 106, 107 endothelial cell function and, 113 epidemiologic studies of, 105, 106 hospital-based case-control studies of, 106 in natural versus surgically induced menopause, lipoprotein metabolism and, 111-113 meta-analysis of, 110, 111 primary versus secondary prevention and, 111 prospective cohort studies of, 108-110 prevention of, integrated approach to, 159-168 risk factor modification in, difficulty of implementation of, 143 MULTIFIT system of, 143-156 Coronary Artery Surgery Study (CASS), 224 Coronary flow deficits during REM sleep, 300, 301 Coronary heart disease, anger in patients with, lifethreatening cardiovascular consequences of, 289-304 atherosclerosis and, 176-178 circadian variation in onset of, 178-183 natural history of, 176-178 psychosocial risk factors in, 97-102 affecting biobehavioral mechanisms in, 99 antidepressive agents in treatment of, 101 buspirone in reduction of Type A behavior and, interventions to reduce impact of on prognosis, 99social support and stress-management skills in reduction of, 99, 100 response-to-injury hypothesis of, 176 Corynebacterium species, in infective endocarditis, 354, Coxiella burnetii, in infective endocarditis, 357, 411

Crises, life, as triggers of acute cardiovascular events, Cryptococcus species, in infective endocarditis, 417 Curvularia species, in infective endocarditis, 416 Day of the week, influence of on occurrence of acute cardiac events, 192, 193 Death, cardiac, sudden, antiarrhythmic drugs in prevention of, 190, 191 circadian patterns and triggers of, 185-193 clinical correlation in, 187-189 day-of-the-week patterns of occurrence of, 192, 193 definition of, 185, 186 dreams as behavioral triggers of, 299-303 human studies of, 301-303 implantable cardioverter defibrillator in studies of, in atherosclerotic coronary artery disease, 186 in athletes, older, 206, 207 triggers of, 195-207 young competitive, 195-206 in obstructive hypertrophic cardiomyopathy, 186 in valvular aortic stenosis, 186 pathology of, 186 pathophysiology of, 186, 187

physical exertion as trigger of, 263-269

mechanism of, 267, 268

risk of during heavy physical exertion, 265-267

in the athlete, 195-207 prevention and practical aspects of, 309-311 without atherosclerotic coronary artery disease, 186 Decision analysis, 624-629 in atrial fibrillation, 628, 629 and randomized, controlled trials, 637 baseline analysis in, 630-632 cost-effectiveness analysis in, 635 limitations of, 632, 634-637 methodology of, 629, 630 paroxysmal, 635, 636 sensitivity analysis in, 632-634 warfarin versus antiarrhythmic therapy for, 629-632 Defibrillation, atrial, 607-620 effects of on atrial myocardium and the coronary sinus, 616, 617 efficacy of, 608-610 animal studies of, 608-610 electrode configuration in, 611-614 animal studies of, 611 human studies of, 611, 612 electrode size in, 612, 613 internal, techniques and indications for, 617, 618 pain in, 616 safety of, 614-616 for bradyarrhythmias, 616 for tachyarrhythmias, 614-616 shock waveform in, 613, 614 with implantable defibrillator, 618-620 Delirium cordis, 483 Dental hygiene, infective endocarditis and, 335 Dental procedures, infective endocarditis and, 329, 330, 333, 335, 336, 385 Diabetes mellitus, infective endocarditis and, 329, 353 Dialysis, renal, infective endocarditis and, 455 Diathesis, endocarditis, 329, 334 Diet and heart disease, 69-79 role of alcohol in, 73-76 beverage type and, 75, 76 epidemiologic studies of, 73, 74 mechanisms of, 74, 75 role of antioxidants in, 76-79 basic research on, 76 human observational data on, 76, 77 randomized trials on, 77-79 role of fat in, 70-73 fish oils and, 73 human observations and randomized trial data on, 71, 72 trans-fatty acids and, 72, 73 serum cholesterol and, 70, 71 Digoxin, for control of heart rate in atrial fibrillation, 524, 525-528 acute, 525, 526 exertional, 526, 527 guidelines for therapy with, 530, 531 long-term, 526 magnesium and, 526 paroxysmal, 527, 528 Dilation and curettage, infective endocarditis and, 332, Diltiazem, for control of heart rate in atrial fibrillation, Diphtheroids, in infective endocarditis, 354

Disasters, natural, as trigger of acute cardiovascular

hemodynamic changes caused by, 233

Disopyramide, for atrial fibrillation, 511

events, 275

triggers of, 180

Doppler echocardiography, in infective endocarditis,

Dreams, as behavioral triggers of ischemia and sudden death, 299-303

coronary flow deficits during, 300, 301 Drug abuse, infective endocarditis and, 329 intravenous, 327, 358–360, 408, 416, 417

Ductus arteriosus, patent, infective endocarditis and, 334. 386

Duodenum, endoscopy of, infective endocarditis and, 330

Echocardiography, in detection of vegetations of infective endocarditis, 440

false-positive, 373

M-mode, 363, 364

prognostic implications of, 377-379

size of, 377-379

two-dimensional, 364-372

in evaluation and management of atrial fibrillation, 543-551

in infective endocarditis, 327

detection of vegetations and embolic events by, 440 Doppler, 376

role of in selection of patients for surgical intervention in, 439-442

transesophageal. See Transesophageal echocardiography (TEE).

transthoracic. See Transthoracic echocardiography (TTE). two-dimensional, size of vegetations and, 377, 378 Eikenella corrodens, in infective endocarditis, 354, 410 Electrical properties, cardiac, impact of anger on in

normal and ischemic heart, 298, 299

Embolic disease, focal, 435

Embolus (emboli) formation, in infective endocarditis, 430

cerebral, 433, 434

surgical treatment of, 453, 454

Endocarditis, infective, 327-339

abortion and, 332

abscesses in, 440, 441

brain, 434

detection of, 374, 375, 379, 440, 441

adenoidectomy and, 330

anaerobic bacteria in, 354, 411, 412

angiography and, 332

animal models of, 328

arteriovenous shunts, iatrogenic, and, 329

atrial septal defect and, 328

average age of patients with, 352

barium enema and, 331

Beth Israel study of, 346

Blalock-Taussig shunts and, 329

blood cultures for, 356, 357

bronchoscopy and, 330

burns and, 329

cardiac surgery and, 332, 337

catheterization and, cardiac, 332

pulmonary arterial, 329

urethral, 331

causative organisms of, 352-355, 397-414. See also names of specific organisms, e.g. Streptococcus viri-

caveats and unanswered questions about, 337, 338

cefamandole for, 334

cefazolin for, 333

cephalothin for, 334 cervical biopsy and, 332 chemoprophylaxis for, 332-337

in certain procedures, 335, 336 selection of regimens of, 336, 337

cirrhosis and, 329

clinical approach to, 351-360

clinical manifestations of, 345-349, 355, 356

cardiac, 355 cutaneous, 356

musculoskeletal, 356

ophthalmologic, 356

clinical profile of, changes in, 327

clubbing of fingers in, 432

collagen vascular diseases and, 329

colonoscopy and, 331 complications of, 377

abscesses as, 431, 434

cardiac, 425-429

cardiac, cerebral, and vascular, 425-436

cerebral embolism as, 433, 434

cerebrospinal fluid abnormalities as, 434

conduction system abnormalities as, 428

cutaneous, 431 detection of, 374-377

diagnosis of, 363

embolus formation as, 430

extracardiac, 430, 432

heart failure as, 432, 433

mycotic aneurysm as, 430, 431, 434

myocardial disease as, 427, 428

neurologic, 433-435

pericardial disease as, 429

peripheral vascular, 430

persistent fever as, 435, 436

petechiae as, 431

renal disease as, 435

seizures as, 434

solid organ, 431, 432

splinter hemorrhages as, 432 valve ring abscess as, 427

valvular disease as, 425-427

vasculitis as, 431

corynebacteria in, 354, 406

culture-negative, 393-395

death rate in, 327

demographics of, 345

dental procedures and, 329, 330

diabetes mellitus and, 329

diagnosis of, 327, 358, 393-396

criteria for, revised, 345-349 Duke University criteria for, 373, 374, 384, 385

role of transesophageal echocardiography in, 363-

role of transthoracic echocardiography in, 363-380 von Reyn criteria for, 373, 374, 384, 385

dilatation and curettage and, 332

diphtheroids in, 354

drug addiction and, 327, 329, 358-360, 408, 416, 417

Duke University study of, 346-349

echocardiography in, 330, 331, 374, 418. See also Transesophageal echocardiography (TEE) and Transthoracic echocardiography (TTE).

role of in patient selection for surgical intervention

for, 439-442

endoscopic procedures and, 330, 418

enterococcal, prevention of, 334

epidemiology of, 351, 352

erythromycin for, 333

etiology of, 345

experimentally induced, 328 fever in, 355, 435, 436

Endocarditis (Continued) intermediate, 334 fungal, 354, 355, 386, 414-416. See also specific names low, 334 of fungi, e.g., Candida species. penicillins for, 333, 334 risk factors for, 414 pharmacodynamics of antimicrobial therapy for, 396 gastrointestinal tract procedures and, 330, 331 pneumococcal, alcoholism and, 353 genitourinary procedures and, 330, 331 diabetes mellitus and, 353 gentamicin for, 334 polymicrobial, 416 gram-negative bacilli in, 354, 406-409 portals of entry for organisms in, 329-332 gram-positive bacilli in, 354 airways and respiratory tract as, 330 cardiac catheterization as, 332 gum disease and, 329, 330 hematologic abnormalities in, 357 cardiac surgery as, 332 hematologic disorders, nonmalignant, and, 329 gastrointestinal tract as, 330, 331 hemodialysis and, 329 genitourinary tract as, 331 hemodynamic factors that predispose to, 328 liver biopsy as, 331 obstetric and gynecologic procedures as, 332 hepatitis, chronic, and, 329 oral cavity as, 329, 330 hyperalimentation and, 329 immunologic abnormalities in, 357 postoperative, 329 immunologic evidence of, 395 predisposing causes and conditions in, 328, 329 immunologic reactions in, 384 prevention of, 332-337 in acquired immunodeficiency syndrome, 417 animal model of, 333, 334 in brucellosis, 354 experimental, 333, 334 in children, diagnosis of, 386 pulmonary artery catheters and, 329, 352 in congenital heart disease. See Congenital heart disrecurrence of, risk of, 352 ease, infective endocarditis in. renal failure and, 329 in congestive heart failure, 443, 444 rifampin for, 334 in degenerative heart disease, 351 right-sided, 419 in geriatric patients, 345 clinical manifestations of, 388 in homeless men, 354 risk of, stratification of by type of cardiac lesion, 334, in human immunodeficiency virus (HIV) infection, sigmoidoscopy and, 331 in intravenous drug users, 345, 352, 358-360, 408, 416, staphylococci in, 404, 405 Staphylococcus aureus in, 345-347 bacteriology and anatomy of, 359 steroids and, 329 clinical characteristics of, 359, 360 streptococci in, 397-404 enterococci, 401-403 diagnosis of, 360 mortality in, 360 group B, 400, 401 group D, 400 in native valves, 442-445, 451, 452 nutritionally variant, 401 complications of, 442, 443 in previously normal valves, 328 pyogenic, 398-400 in prosthetic valves, 345, 429, 445-448, 452 streptomycin for, 333 early versus late, 446, 447 subacute versus acute, 327, 328 inflammatory bowel disease and, 418 surgical intervention in, 439 intrauterine contraceptive devices and, 332 congenital heart lesions and, 454 intubation and, 330 echocardiography in, 455, 456 laboratory findings in, 356, 357, 395 for congestive heart failure, 443-444, 453 liver biopsy and, 331 for embolization, 453, 454 major surgery and, 329 for extension, sepsis, and persistent infection, 444, management of, antibiotic, advances in, 393-419 medical, advances in, 393-419 for infected pacemaker and defibrillator leads, 448, role of transesophageal echocardiography in, 363for persistent sepsis, 452, 453 role of transthoracic echocardiography in, 363-380 for systemic embolism, 445 microorganisms causing, 352-355, 393-396 for tricuspid valve infection, 445 mitral valve prolapse and, 334, 335, 351 for valvular abnormalities and dysfunction, 441 mitral-aortic intervalvular fibrosa in, detection of, 375, for vegetations and embolic events, 440 376 in aortic valve, 456-459 nafcillin for, 334 in immunosuppressed patients, 454, 455 nasal cautery and, 330 in mitral valve, 457-461 neoplastic diseases and, 329 in mycotic aneurysms, 448 neurologic manifestations of, 388 in prosthetic valves, 447, 448, 454 nonvalvular, detection of, 372, 373 in renal dialysis patients, 455 nosocomial infections in, 452 in tricuspid valve, 461-463 indications for, 439-449, 452-455 obstetric and gynecologic procedures and, 332 of tricuspid valve, 445 issues in, 451-463 oral hygiene and, 329, 330 operative management during, 456 outcomes and future of, 462, 463 pacemakers and, 418 parturition, uncomplicated, and, 332 principles of, 455, 456 pathogenesis of, 327, 328 role of echocardiography in, 439-442 patients at risk for, 329 transesophageal echocardiography (TEE) and, 453 high, 334 Swan-Ganz catheters and, 329, 352

tonsillectomy and, 330 transesophageal echocardiography (TEE) and, 330, 331, 418 transplant-related, 418, 419 transurethral resection of the prostate and, 331 treatment of, 327 outpatient, 396, 397 trench fever and, 354 urinary abnormalities in, 357 urinary tract infection and, 331 vancomycin for, 333 vegetations in, 363 detection of, 363-373, 377-379 size of, 377-379 ventricular septal defect and, 328 Endocarditis diathesis, 329, 334 Endoscopy, gastrointestinal, risk of infective endocarditis following, 330, 418 infective endocarditis and, 336 Endothelial dysfunction, 4-6 Endothelium, vascular, in regulation of vasomotion, 1-13 arginine deficiency and, 8 destruction of nitric oxide by superoxide in, 9-11 effect of diseases on, 4-7 future directions for clinical care and, 13 historical perspective of, 1, 2 implications of for risk-factor management, 13 improvement of by treatment of hypercholesterolemia, 11-13 in atherosclerosis and hypercholesterolemia, alterations in, potential mechanisms of, 7-11 membrane signaling alterations in, 8, 9 nitric oxide derived from, 2 nitric oxide synthase alterations in, 9 Endothelium-derived hyperpolarizing factor, 3, 4 Endothelium-derived relaxing factor, 2 Enterobacter cloacae, in infective endocarditis, 419 Enterobacter species, in infective endocarditis, 354, 407 Enterobacteriaceae, in infective endocarditis, 406-409 Enterococcus faecalis, in infective endocarditis, 353, 385, 401, 402 Enterococcus faecium, in infective endocarditis, 401, 402 Enterococcus species, in infective endocarditis, 353, 401, 402, 416 vancomycin-resistant, 402, 403 Erysipelothrix rhusiopathiae, in infective endocarditis, 354, Erythromycin, to prevent infective endocarditis, 333 Escherichia coli, in infective endocarditis, 354, 419 Esmolol, for heart rate control in atrial fibrillation, 524, Esophagus, endoscopy of, infective endocarditis and, 105-114 angiographic studies of, 107, 108

330
Estrogen(s), effect of on coronary artery disease, 105–114
angiographic studies of, 107, 108
cardioprotective mechanisms of, 111–113
case-control studies of, 106, 107
endothelial cell function and, 113
lipoprotein metabolism and, 111–113
meta-analysis of, 110, 111
prospective cohort studies of, 108–110
type of menopause and, 111
Estrogen-replacement therapy, balancing risks and benefits of, 113, 114
effect of on endothelial cell function, 113
effect of on lipoprotein metabolism, 111–113
primary versus secondary, 111
Estrogens, menopause, and coronary artery disease, 105–114

Euglobulin fibrinolytic activity, circadian variation in, European Concerted Action on Thrombosis and Disabilities Angina Pectoris Study (ECAT), 240 Excitation, reentrant, in atrial arrhythmias, 471, 472 Exercise, antiatherosclerotic effect of, 85-94 developing prescription for, 90-93 studies on, 85-90 training techniques in, 93, 94 balancing cardiac risks and benefits of, 268 prescription for in atherosclerosis, 90-93 activity classification in, 91-93 for apparently healthy individuals, 91, 92 for individuals with known, stable cardiovascular disease with low risk for vigorous exercise, 92 for individuals with moderate to high risk for cardiac complications during exercise, 92 for individuals with unstable disease with activity restriction, 92, 93 to reduce risk of triggering acute coronary events, mechanisms of, 267, 268 training techniques for, 93, 94 Exertion, physical, as trigger of myocardial infarction and sudden cardiac death. 263-269 risk of nonfatal myocardial infarction during, 264, 265 mechanism of, 267, 268 risk of sudden cardiac death during, 265-267 mechanism of, 267, 268 Exophiala species, in infective endocarditis, 416

Factor VII as hemodynamic risk factor, 242 Fat, dietary, role of in heart disease, 70-73 Fever, in infective endocarditis, 388 persistent, 435, 436 Fibrillation, atrial, ablation for, 478, 480. See also Fibrillation, atrial, atrioventricular junctional ablation for and Fibrillation, atrial, catheter ablation for. direct, 584-586 indirect, 584 activation space constant in, 499 after cardiac surgery, 501 amiodarone for, 513, 514, 532, 533 antiarrhythmic drug therapy for, 507-517, 521-534. See also specific names of drugs, e.g., Quinidine. cellular targets of, 508, 509 electrophysiology and, 508, 509 evaluation of, 509 limitations of, 516, 517 mechanisms of action of, 508, 509 staged care approach to, 515, 516 as both cause and result, 503 atrial refractoriness and, age-related, 488, 489 dispersion of, 486-489 atrioventricular junctional ablation for, 555-566 catheter placement in, 557, 561 catheter selection in, 561 complications of, 565, 566 direct current energy in, 555, 556 energy delivery in, 561 energy sources for, 555, 556 escape rhythm after, 564 future management strategies and, 566 future techniques of, 565 hemodynamic and symptomatic effects of, 564, 565 options after failure of, 562 patient preparation for, 557, 561 patient selection for, 556-560 postablation procedure in, 562

Fibrillation (Continued) radiofrequency energy in, 556 results of, 562-564 success rates of, 563 technique of, 557, 561 atrioventricular junctional modification for, 564, 565 beta-blocking agents for control of heart rate in, 524, 528, 529. See also specific names, e.g., Propranolol. calcium-channel blockers for control of heart rate in, 524, 529-531. See also specific names, e.g., Verapamil. cardioversion in. See Cardioversion in atrial fibrillation. catheter ablation for, 583-588 animal models of, 583 atrial flutter following, 586, 588 background of, 583 catheter maze procedure in, 585, 586 focal, 585 other energy forms in, 588 right atrial-only, 586, 587 chronic, prevention of embolization in, 539-541 clinical spectrum of, 500-502 decision analysis in, 623-637 digoxin for control of heart rate in, 524, 525-528 disopyramide for, 511 effects of ablation and surgical lesions on, 479, 480 electrical remodeling in, 475, 476 electrophysiologic aspects of, 483-503 summary of, 500 treatment implications and, 503 epidemiology of, 507 flecainide for, 511-513, 532, 533 adverse effects of, 512, 513 heart rate control versus rhythm management in, 507, heart rate in, optimal, 523, 524 historical background of, 483 ibutilide for, 515 in valvular heart disease, 501 in Wolff-Parkinson-White syndrome, 489, 490, 501, initiation of, 592 magnitude squared coherence spectrum in, 499 mapping of, 584 observations from, 493-495 measuring organization in, catheter-based strategies for, 495-500 mechanisms and promoters of, 472-476 multiple wavelet hypothesis of, 472, 473, 484 evidence for, 489-492 maze procedure as test of, 492 pacing strategies to prevent, 591-595 paroxysmal, autonomic influences in, 502 pathophysiology in, 500-502 persistence of, 473-475 pharmacologic control of, 521-534. See also Antiarrhythmic drugs for atrial fibrillation and specific names of drugs, e.g., Propranolol. prevention of embolization in, aspirin in, 539, 540 primary, 539, 540 secondary, 540, 541 warfarin versus aspirin in, 540 procainamide for, 510, 511 propafenone for, 513, 532, 533 quality of life in patients with, 597-605 Ablate and Pace Registry (APT) study of, 603 Atrial Fibrillation Follow-Up: Investigation of Rhythm Management (AFFIRM) study of, 603,

discussion of findings about, 604, 605

multidimensional assessment of, 600-602 patient interview to determine, 598-600 self-reported symptoms and, 600 studies related to, 598, 599, 603, 604 quinidine for, 509-511 adverse affects of, 510 rate control in, drug therapy for, 524, 525, 526 versus restoration of sinus rhythm in, 623, 624 reentry as mechanism for, 483, 484 role of alcohol in, 502 role of echocardiography in evaluation and management of, 543-551 sotalol for, 514, 515, 531, 532 spectrum of behavior of, 492, 493 therapeutic strategies for, decision analysis and, 623thromboembolism in, prevention of, 537-541 transesophageal echocardiography (TEE) in, 544 types of, 492-495 ventricular rate in, 521 versus atrial flutter, 480 Fibrinogen as hemodynamic risk factor, 240-242 Fibrinolysis as hemodynamic risk factor, 242 Fibrosa, mitral-aortic intervalvular, detection of, 375, Finger(s), clubbing of, in infective endocarditis, 432 Fish oils, role of in heart disease, 73 Flecainide, for atrial fibrillation, 511-513, 532, 533, 624 adverse effects of, 512, 513 Flow deficits, coronary, during REM sleep, 300, 301 Flutter, atrial, and atrioventricular nodal reentry, 580, 582 atypical, 579 boundaries in, 477, 478 catheter ablation for, 569-583 atrial arrhythmias following, 579 background of, 569, 570 future directions in, 582, 583 results and measures of efficacy of, 577-579 studies of, 574-577 temperature and, 579 circuit anatomy and location in, 570-573 following cardiac surgery, 579, 580 left, 580 mapping studies of, 573-575 mechanisms and promoters of, 476-478 pathophysiology of, 570 primary ablation of, 569-588 reentrant mechanism for, 471 versus atrial fibrillation, 480 Framingham Heart Study, 179, 187 Fungus (fungi), in infective endocarditis, 354, 355, 386, 414-416 Dematiaceae, 416 Fusobacterium necrophorum, in infective endocarditis, 354, 412

Gastrointestinal procedures, infective endocarditis and, 335, 336, 337, 418

Gemella haemolysans, in infective endocarditis, 413
Genitourinary procedures, infective endocarditis and, 330, 331, 335, 336, 337
Gentamicin, to prevent infective endocarditis, 334
Gingivitis, infective endocarditis and, 330
Glomerulonephritis, in infective endocarditis, 384, 435
Gram-negative bacilli, in infective endocarditis, 354, 406–409
Gram-positive bacilli, in infective endocarditis, 354

Gum disease, infective endocarditis and, 329, 330, 335,

prevention of, 389

Gynecologic procedures, infective endocarditis and, 332

HACEK group of gram-negative bacteria, 354 in infective endocarditis, 399, 409-411 Haemophilus species, in infective endocarditis, 354, 409, 410, 417

Heart, normal, impact of anger on electrical properties

of. 298, 299 Heart disease, congenital. See Congenital heart disease. coronary. See Coronary heart disease.

role of diet in, 69-79 Heart failure, in infective endocarditis, 432, 433

congestive, 355, 443, 444 surgical treatment of, 453

Hematologic disorders, nonmalignant, infective endocarditis and, 329 Hemodialysis, infective endocarditis and, 329, 334

Hemodynamic changes, as triggers of cardiovascular events, 229-237

clinical implications and future direction of, 236.

during exercise-induced ischemia versus spontaneous ischemia during daily life, 234-236 during mental stress, 232, 233

during nocturnal myocardial ischemia, 236

factors influencing, 230

in morning hours, role of, 230-232

in response to environmental factors, 232, 233 role of in acute cardiac events, 230 role of in myocardial ischemia, 233, 234

Hemodynamic function, impact of anger and postanger states on, 297

Hemorrhage(s), splinter, in infective endocarditis, 356,

Hemostatic factors, as triggers of cardiovascular events,

epidemiologic data supporting the presence of, 240-243

factor VII as, 242

fibrinogen as, 240-242

fibrinolysis as, 242

future directions in study of, 247, 248

platelet activity as, 243

von Willebrand factor as, 242, 243

circadian variation of, 243-245

effect of medication on, 245

in fibrinolytic activity, 245

in platelet reactivity, 245

effect of potential triggering activities on, 245-247 Heparin, circadian variation in anticoagulant effect of,

effect of on circadian variation of cardiovascular events, 245

Hepatitis, chronic, infective endocarditis and, 329 Histoplasma species, in infective endocarditis, 414, 415 "Holiday heart," 502

Homeless men, infective endocarditis in, 354

Human immunodeficiency virus (HIV) infection, infective endocarditis in, 417

Hyperalimentation, infective endocarditis and, 327, 329 Hypercholesterolemia, altered endothelial regulation of vasomotion in, 6-11

treatment and, 11-13

Hypertension, cardiac outcome measures in, 138 need for treatment of, 132, 133

renal outcome measures in, 138 treatment outcome measurement in, 131-142 aortic and peripheral vascular disease as, 140 arterial compliance as, 138, 139 blood pressure as, 133, 134

cardiac events as, 140

cerebrovascular events as, 140

concomitant metabolic risk factors as, 138

controversies about, 141, 142

cost-effectiveness as, 140, 141

direct and indirect costs of treatment as, 136 evidence of clinical atherosclerosis as, 13

frequency of laboratory tests as, 136

frequency of physician visits as, 135, 136 global evaluations by patient and physician as, 136,

intermediate, 137-139

lifestyle modifications as, 135

long-term, 139-141

mortality as, 139

number of drugs taken as, 135

patient compliance as, 135

patient days lost from work as, 139

pros and cons of, 141

quality of life as, 134, 135

renal events as, 140

routine clinical chemistries as, 135

short-term, 133-137

symptomatic side effects as, 134

Ibutilide, for atrial fibrillation, 515

Immunosuppression. See also Human immunodeficiency virus (ĤIV) infection.

infective endocarditis and, 454, 455

Inflammation, in response to coronary plaque rupture, 216, 217

role of in atherosclerosis, 212, 213

Insect bites, infective endocarditis and, 387

Intrauterine contraceptive device(s), infective

endocarditis and, 332, 336, 337

Intubation, infective endocarditis and, 330, 335

Ischemia, myocardial, anger-induced, 292, 293

animal studies of, 293-299

central neuroanatomic basis of, 293, 294

human studies of, 293

role of peripheral autonomic nervous system in, 294-297

cigarette smoking as trigger of, 278

dreams as behavioral triggers of, 299-303

exercise-induced, hemodynamic changes during, 234-236

impact of anger on electrical properties of heart with, 298, 299

mental stress as trigger of, 271-285

ambulatory electrocardiogram studies as evidence for, 276-278

clinical significance of, 282-284

evidence for, 276-280

laboratory studies of, 278-280

pathophysiology of, 280-282

prognostic significance of, 282-284

summary of characteristics of, 282

therapeutic applications of findings on, 284, 285

versus ischemia during daily life, 282

nocturnal, hemodynamic changes during, 236

post-stress, 297, 298

role of hemodynamic changes in, 233, 234

spontaneous, hemodynamic changes during, 234-236

Janeway's lesions, 356, 384, 432

Kidney(s), "flea-bitten," 435 Kidney failure, infective endocarditis and, 329 Kingella kingae, in infective endocarditis, 410, 411 Kingella species, in infective endocarditis, 354 Klebsiella species, in infective endocarditis, 354

Lactobacillus species, in infective endocarditis, 354 Legionella pneumophila, in infective endocarditis, 413, 414 Lipid(s), serum, lowering of, cost-effectiveness of, 125, 126 in reducing risk of coronary artery disease, 117-128 prognostic role of in coronary heart disease, 120, Lipid disorders. See also Lipoproteins(s). cardiologist's role in detection and management of, Lipid-lowering agents, clinical trials of, early, 121-123 recent, 123-125 using angiographic endpoints, 123 Lipoprotein(s), and thrombosis, 120 low-density, and endothelial dysfunction, 118, 119 and plaque instability, 119, 120 in smooth cell proliferation, 119

metabolism of, effect of estrogen on, 111-113

prognostic role of in coronary heart disease, 120, 121

Listeria monocytogenes, in infective endocarditis, 354, 412 Liver, biopsy of, infective endocarditis and, 331, 336

Long QT syndrome as cause of exercise-related sudden

Magnesium, and digoxin in acute heart rate control, 526 Magnitude squared coherence spectrum, in atrial fibrillation, 499

Marfan syndrome, aortic rupture in, as cause of sudden cardiac death in young competitive athletes, 201

Markov decision model, 628

death in young athletes, 204

Menopause, effect of on coronary artery disease. See Estrogen(s), effect of on coronary artery disease.

Metoprolol, for heart rate control in atrial fibrillation, 528, 529

Mitral valve(s), infective endocarditis in, 457-461 prolapse of, as cause of sudden cardiac death in young competitive athletes, 202, 203 infective endocarditis and, 334, 335

Morning hours, changes in hemostatic factors during, 243-245

hemodynamic changes in, role of in cardiovascular events, 230-232

Mucor species, in infective endocarditis, 414 Multicenter Investigation on the Limitation of Infarct Size (MILIS), 251, 263, 264

MULTIFIT system of risk factor modification in coronary artery disease, 143-156

clinical trial of, 146-148 implications of, 148-150

counseling to prevent smoking relapse in, 146, 147 development of, 144-146

dietary counseling in, 147 expanded clinical applications of, 154-156 factors influencing dissemination of, 150-152 financial implications of, 153, 154

home-based exercise training in, 144, 145, 147

implications of for American health care, 150-154 in management of diabetes mellitus, 155, 156 in management of heart failure, 154, 155 in management of hypertension, 155 lipid-lowering drug therapy in, 147 phone therapy in, 150 policy implications of, 152, 153 Multiple wavelet hypothesis of atrial fibrillation, 472, 473, 484 evidence for, 489-492

maze procedure as test of, 492

Murmur, heart, in infective endocarditis, 355 change in, 388

Mycoplasma hominis, in infective endocarditis, 455 Myocardial disease, as complication of infective endocarditis, 427, 428

Myocardial infarction, acute, angiographic morphology of coronary artery following, 225, 226 circadian variation in onset of, 178–183 compared with circadian pattern of efficacy of tis-

sue-type plasminogen activator, 254, 255 in Framingham Heart Study, 179 coronary anatomy before, 221-223

day-of-the-week patterns of occurrence of, 192, 193 incidence of, 175

increased risk of during morning hours, 230–232 mental stress as trigger of, **271–285**

nonfatal, risk of during heavy physical exertion, 264, mechanism of, 267, 268

physical exertion as trigger of, 263-269

precipitated by anger, epidemiologic studies of, 289-

role of plaque size and degree of stenosis in, 221-226 triggers of, 176-178 historical background on, 176-178

prevention and practical aspects of, 309-311 use of beta blockers after, in prevention of death, 190 Myocardial Infarction Onset Study, 182

Myocarditis as cause of sudden cardiac death in young

competitive athletes, 202

Nafcillin, to prevent infective endocarditis, 334 Nail biting, infective endocarditis and, 335, 389 Natural disasters, as trigger of acute cardiovascular events, 275

hemodynamic changes caused by, 233 Neisseria gonorrhoeae, in infective endocarditis, 354, 405,

406 Neoplastic disease(s), infective endocarditis and, 329 Nicotine, dependency on, 56

systemic effects of, 53, 54 Nicotine gum, 59

Nicotine patch, transdermal, 58, 59 Nicotine replacement therapy, 57–59

Night terrors, impact of on heart function, 302 Nightmares, impact of on heart function, 302

Nitric oxide, in endothelial control of vasomotion, 1-13 alterations of nitric oxide synthase in atherosclerosis and hypercholesterolemia and,

destruction of nitric oxide by superoxide in

atherosclerosis and hypercholesterolemia and, intracellular signaling pathways in, 3

multifaceted roles of, 2 Northwick Park Heart Study, 240, 242

Obstetric procedure(s), infective endocarditis and, 332

Onset Study of myocardial infarction, 264, 265 anger scale of, 290 Oral hygiene, infective endocarditis and, 329, 330 Osler's nodes, 327, 356, 384, 431, 432

Pacemaker(s), infective endocarditis and, 334, 418, 448,

Pacing, to prevent atrial fibrillation, 591-595 dual-site, 594 mode of, 592, 593 novel algorithms for, 595 rate of, 594 site of, 593, 594

Paecilomyces species, in infective endocarditis, 414 Pain, musculoskeletal, in infective endocarditis, 356 Panophthalmitis, in infective endocarditis, 356 Parturition, infective endocarditis and, 332 Pasteurella species, in infective endocarditis, 409

Pattern(s), circadian, in strokes, 179, 180

of coronary heart disease, epidemiologic aspects of, 175-183

pharmacologic agents affecting, 182, 183 septadian, of acute cardiac events, 192, 193 Penicillin(s), to prevent infective endocarditis, 333, 334 Peptostreptococcus species, in infective endocarditis, 412 Pericardial disease, as complication of infective endocarditis, 429

Periodontal disease, infective endocarditis and, 335 Personality type as factor in anger-induced myocardial infarction, 291, 292

Petechiae, in infective endocarditis, 356, 431 Physician's Health Study, 245

Plaque(s), atherosclerotic, 18-20

composition of, 212

in smokers versus nonsmokers, 212

endothelial dysfunction and, effect of lipid-lowering and antioxidant therapy on, 24, 25

rupture of, 182

as pathologic finding in coronary artery disease,

consequences of, 22

inflammatory responses to, 216, 217

mechanical and hemodynamic forces in, potential role of, 20-22

pathogenetic factors for triggering and timing of,

pathophysiology and inflammatory aspects of, 211-

pathophysiology of, 17-25 size as factor in, 215

stenosis severity and, 17, 18

thrombotic response to, 215, 216 triggering agents and, 177, 178

vulnerability to, 18-20, 213-215

size of, and propensity for rupture, 215 role of in acute myocardial infarction, 221-226 stabilization of, 17-25

new paradigm for, 22-24

types of, 213

vulnerability of to rupture, 18-20, 213-215

Plasminogen activator, tissue-type, circadian variation in, 252-258

compared with circadian pattern of incidence of myocardial infarction, 254, 255 implications of for chronotherapy, 259-261

shorter time to treatment as factor in, 252, 253 Plasminogen activator inhibitor-1, circadian variation in, 257, 258

Platelet activity as hemodynamic risk factor, 243 Prevotella bivia, in infective endocarditis, 413 Procainamide, for atrial fibrillation, 510, 511 Progetto Lombardo Atero-Trombosi (PLAT) Study, 243 Propafenone, for atrial fibrillation, 513, 532, 533 Propionibacterium acnes, in infective endocarditis, 412 Propranolol. See also Beta-blocking agents. after myocardial infarction, prevention of death by,

for heart rate control in atrial fibrillation, 524, 528,

Prostate, transurethral resection of, infective endocarditis and, 331

Prosthetic valve(s), infective endocarditis and, 327, 334, 337, 338, 386, 429, 445-448, 454 echocardiographic detection of vegetations in, 364,

Proteus species, in infective endocarditis, 354 Pseudallescheria boydii, in infective endocarditis, 414, 416,

Pseudomonas aeruginosa, in infective endocarditis, 408,

Psychosocial risk factors in coronary heart disease, 97-102

interventions to reduce impact of on prognosis, 99-

psychopharmacologic management of, 100-102 social support and stress-management skills in reduction of, 100

Pulmonic stenosis, valvar, infective endocarditis and,

Pyorrhea, alveolar, infective endocarditis and, 329, 330

O fever, infective endocarditis in, 357, 395, 411 Quinidine. See also Antiarrhythmic drugs. for atrial fibrillation, 509-511, 624 adverse affects of, 510

Reentrant excitation, as mechanism of atrial fibrillation, 483, 484

in atrial arrhythmias, 471, 472

Reentry, anisotropic conduction and, 484-486 as mechanism of atrial fibrillation, 483, 484 atrial mass and, 484

leading circle, 494, 495 in atrial fibrillation, 471, 472

random, 494, 495

types of, 494, 495

Refractory block, by antiarrhythmic drugs, 479 Refractory period, in atrial fibrillation, 486-489 Regurgitation, mitral, infective endocarditis and, 335 REM sleep, coronary flow deficits during, 300, 301

Renal disease. See also Kidney. following infective endocarditis, 435

Reviere, Lazare, 327

Rifampin, to prevent infective endocarditis, 334 Rochamimaea species, in infective endocarditis, 412, 413 Roth spot, in infective endocarditis, 356

Saccharomyces cerevisiae, in infective endocarditis, 414, 415

Salmonella species, in infective endocarditis, 407, 408 Schlicter's test, 396 Scopulariopsis brevicaulis, in infective endocarditis, 415

652 **CUMULATIVE INDEX 1996** Seizure(s), in infective endocarditis, 434 Sepsis, persistent, in infective endocarditis, surgical treatment of, 452, 453 Septadian patterns of acute cardiac events, 192, 193 Septal defect(s). See Atrial septal defect(s) and Ventricular septal defect(s). Serratia marcescens, in infective endocarditis, 354 Shunt(s), infective endocarditis and, arteriovenous, 329, 334 cerebral ventriculoatrial, 334 congenital, 334 surgically created, 334 Sigmoidoscopy, infective endocarditis and, 331 Sleep, REM, coronary flow deficits during, 300, 301 Smoker, hospitalized, management of, 60, 61 in outpatient practice, four-step model for counseling of, 62-64 management of, 61-64 with or at risk of coronary heart disease, management of, 59, 60 Smoking. See Cigarette smoking. Sotalol, for atrial fibrillation, 514, 515, 531, 532 Spasm, coronary, as cause of exercise-related sudden death in young athletes, 204 Splenomegaly, in infective endocarditis, 356 Splinter hemorrhages, in infective endocarditis, 356 Staphylococcus albans, in infective endocarditis, 385 Staphylococcus aureus, in infective endocarditis, 345-347, 353, 354, 385, 399, 404, 405 Staphylococcus epidermidis, 334 in infective endocarditis, 354, 385, 405 Staphylococcus species, in infective endocarditis, 353, 354, 404, 405 Stenosis, aortic, valvular, sudden cardiac death in, 186 arterial, comparison of autopsy and natural history studies with angiography in diagnosis of, 223, degree of, role of in acute myocardial infarction, 221-226 risk of infective endocarditis in, aortic, 387 pulmonic, 387 Sternotrophomonas maltophilia, in infective endocarditis, 408 Steroid(s), infective endocarditis and, 329 Stomach, endoscopy of, infective endocarditis and, 330 Stomatococcus mucilaginosus, in infective endocarditis, 413 Streptococcus bovis, in infective endocarditis, 385, 386 Streptococcus equinus, in infective endocarditis, 385, 386 Streptococcus pneumoniae, in infective endocarditis, 385, Streptococcus species, in infective endocarditis, 353, 385, 397-404 group B, 400, 401 group D, 400 nutritionally variant, 401 pyogenic, 398, 400 Streptococcus viridans, in infective endocarditis, 330, 385

Stress, as trigger of acute cardiovascular events,

epidemiologic evidence for, 273-276

as trigger of plaque rupture, 177, 178

logic model of, 272, 273 effect of on hemostatic factors, 246, 247

hemodynamic changes caused by, 232, 233

myocardial ischemia following, 297, 298

mental. See also Anger.

271-285

Surgical lesions, effects of on atrial fibrillation and flutter, 478, 480 Swan-Ganz catheter(s), infective endocarditis and, 329, Tachycardia, circadian rhythms in, 190 reentry in, 471, 472 TEE (transesophageal echocardiography). See Transesophageal echocardiography (TEE). Teeth, procedures involving, infective endocarditis and, 329, 330 Tetracycline, to prevent infective endocarditis, 333 Tetralogy of Fallot, risk of infective endocarditis in, 386, Thromboembolism, in atrial fibrillation, prevention of, 537-541 Thrombolysis, circadian variations in, 251-261 using tissue-type plasminogen activator, 252 Thrombolysis in Myocardial Infarction (TIMI) II Study, Thrombosis, circadian variations in, 251, 252 evening sensitivity versus morning resistance in, 252 Tissue-type plasminogen activator. See Plasminogen activator, tissue-type. Tonsillectomy, infective endocarditis and, 330, 335 Tooth care in infective endocarditis, 389 Transesophageal echocardiography (TEE), advantages and disadvantages of, 374 bacteremia associated with, 379 false-positive, 373 in atrial fibrillation, 544 and return of atrial mechanical function after cardioversion, 549, 550 assessment of left atrial appendage function by, 545, 548, 549 before cardioversion for, 538, 539 cardioversion guided by, 550 detection of left atrial thrombi by, 545-548 predictors of success of cardioversion in, 544, 545 spontaneous echo contrast in, 549 in congenital heart disease, pulmonic valve vegetations in, 368 in infective endocarditis, 330, 331, 337 aortic valve vegetations in, 367 detection of abscesses by, 370, 375, 379, 440, 441 detection of valvular abnormalities and dysfunction by, 441 detection of vegetations in, 366-372, 440 Streptomycin, to prevent infective endocarditis, 333, 334 intraoperative, 455, 456 of prosthetic valves, 369, 448 risk of, 418 size of vegetations and, 378 surgical intervention and, 453 as trigger of myocardial ischemia and infarction, in the operating room, 376, 377 negative, 372 effect of on cardiovascular pathology, pathophysioversus transthoracic echocardiography, 366, 368, 371, Trans-fatty acids, role of in heart disease, 72, 73 Transplantation, risk of infective endocarditis after, 418,

physiologic response to, 272, 273 Stroke(s), circadian patterns in, 179, 180

atrial flutter following, 579, 580

major, 329

oral, 335, 336

Surgery, cardiac, atrial fibrillation following, 501

infective endocarditis and, cardiac, 327, 332, 336

Transposition complexes, risk of infective endocarditis in, 386

Transthoracic echocardiography (TTE), advantages and disadvantages of, 374

false-positive, 373

in atrial fibrillation, 543, 544

in infective endocarditis, detection of abscesses by, 374, 375, 440, 441

detection of valvular abnormalities and dysfunction by, 441

versus transesophageal echocardiography, 366, 368, 371, 372

Trauma, emotional. See Stress, mental.

Trench fever, infective endocarditis and, 354

Trigger(s), in angina pectoris, 180

in sudden cardiac death, 180

of acute cardiovascular events, environmental factors as, 232

epidemiologic aspects of, 175-183

hemodynamic changes as, 229–237 hemostatic factors as, 239–248

historical hashenound on 179

historical background on, 178

mental stress as, 232

physical activities as, 232

prevention and practical aspects of, 309-311 stress as, 177, 178

of myocardial infarction, mental stress as, 271–285 physical exertion as, 263–269

of myocardial ischemia, dreams as, 299–303 mental stress as, **271–285**

mental stress as, 271–28 smoking as, 278

of sudden cardiac death, 185–193 dreams as, 299–303

physical exertion as, 263–269

Triggers and Mechanisms of Myocardial Infarction (TRIMM) study, 180, 181, 264, 265

TTE (transthoracic echocardiography). See *Transthoracic* echocardiography (TTE).

Urinary tract infection, infective endocarditis and, 331

Valve(s), abnormalities of, detection of by transesophageal echocardiography (TEE), 441, 442 aortic, infective endocarditis in, 456–459 disease of, atrial fibrillation in, 501 dysfunction of, congenital, infective endocarditis and, 334 mitral. See *Mitral valve(s)*.

prosthetic. See *Prosthetic valve(s)*. tricuspid, infective endocarditis in, 461–463

Vancomycin, to prevent infective endocarditis, 333, 334, 337

Vascular disease(s), infective endocarditis and, 329 Vasculitis, in infective endocarditis, 384, 431

Vasomotion, endothelial control of, altered, arginine deficiency in, 8

destruction of nitric oxide by superoxide in, 9–11 in atherosclerosis and hypercholesterolemia, potential mechanisms of, 7–11

in human subjects, 6, 7

membrane signaling alterations in, 8, 9 nitric oxide synthase alterations in, 9

and nitric oxide production, 1-13

basic concepts of, 1-4 effect of diseases on, 4-7

effect of diseases on, 4–7

future directions for clinical care in, 13

historical perspective of, 1, 2

hypercholesterolemia and, 7

improvement in via treatment of hypercholesterolemia, 11-13

risk-factor management in, 13

Vegetation(s), in infective endocarditis, 363, 440

and prosthetic valves, 364, 366 defined, 425

detection of, 363–373

prognostic implications of detecting, 377-379 right-sided, 364, 372, 378, 379

size of, 377–379

Veillonella alcalescens, in infective endocarditis, 413

Ventricular dysplasia, right, arrhythmogenic, as cause of sudden cardiac death in young competitive athletes, 203, 204

as cause of exercise-related sudden death in young athletes, 204

Ventricular septal defect(s), infective endocarditis in, 328

risk of, 386, 387

Verapamil. See also Calcium-channel blockers.

for control of heart rate in atrial fibrillation, 524, 529-531

von Willebrand factor as hemodynamic risk factor, 242, 243

War as trigger of acute cardiovascular events, 274, 275 Warfarin, in atrial fibrillation, contraindications to, 624 versus aspirin in prevention of embolization in, 540 Wavelength, in conceptual models of reentry in atrial fibrillation, 483

Wolff-Parkinson-White syndrome, as cause of exerciserelated sudden death in young athletes, 204 atrial fibrillation in, 489, 490, 501, 502

Xanthomonas maltophilia, in infective endocarditis, 408

Yersinia enterocolitica, in infective endocarditis, 409